

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1-90. (Cancelled)

91. (Currently amended) A method for processing [[a]] an elongated metal body, comprising:

moving the elongated metal body in an extending direction of the elongated metal body;

heating the elongated metal body locally up to a temperature for performing solution heat treatment of the elongated metal body thus forming a low deformation resistance region;

deforming the elongated metal body at the low deformation resistance region by twisting the elongated metal body about a rotational axis of the elongated metal body arranged substantially parallel to the extending direction of the metal body by application of torsional force, and quenching the elongated metal body thus forming a non-low deformation resistance region where the metal structure of the elongated metal body is turned into finer grain structure and an amount of addition elements placed in solid solution is increased; and

performing aging treatment by maintaining the elongated metal body at a temperature which does not turn the metal structure into coarser grain structure after turning the metal structure of the elongated metal body into the finer grain structure.

92. (Currently amended) A method for processing [[a]] an elongated metal body, comprising:

moving the elongated metal body in an extending direction of the elongated metal body;

heating the elongated metal body locally up to a temperature for performing solution heat treatment of the elongated metal body thus forming a first low deformation resistance region;

deforming the metal body at the first low deformation resistance region by twisting the elongated metal body about a rotational axis of the elongated metal body arranged substantially parallel to the extending direction of the metal body by application of torsional force, and quenching the elongated metal body thus forming a non-low deformation resistance region where metal structure of the elongated metal body is turned into finer grain structure and an amount of addition elements placed in solid solution is increased;

heating the elongated metal body at the non-low deformation resistance region up to a temperature at which the recrystallization of metal structure is

generated in the elongated metal body thus forming a second low deformation region, a temperature for forming the second low deformation region being lower than the temperature for forming the first low deformation resistance region;

deforming the elongated metal body at the second low deformation resistance region by twisting, and quenching the elongated metal body thus turning the metal structure of the elongated metal body into further finer grain structure; and

performing aging treatment by maintaining the elongated metal body at a temperature which does not turn the metal structure into coarser grain structure after turning the metal structure of the elongated metal body into finer grain structure.

93. (Currently amended) A method for processing an elongated metal body according to claim 92, further comprising preheating the elongated metal body before heating the elongated metal body up to the temperature for performing solution heat treatment of the elongated metal body for forming the first low deformation resistance region.

94. (Currently amended) A method for processing an elongated metal body according to claim 93, wherein a temperature of the preheating is set to the solution heat treatment temperature.